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SPECIFICATION FOR METAL REEDS

(Second Revision)

UDC 677·058·11 : 669

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NEW DELHI 110002

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SPECIFICATION FOR METAL REEDS

(Second Revision)

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Indian Standard

SPECIFICATION FOR METAL REEDS

(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 9 September 1983, after the draft finalized by the Cotton Weaving Machinery Components Sectional Committee had been approved by the Textile Division Council.

0.2 This standard, first published in 1965, was revised in 1970. The standard has been revised again in the light of experience gained in the use of this standard and is based on the manufacturing practices followed in the country in this field.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements for metal reeds used in weaving machines.

2. SHAPE AND NOMENCLATURE

2.1 The shape and nomenclature of various components of metal reeds are given in Fig. 1.

3. MATERIALS

3.1 Dents — The reed wire used in the manufacture of dent shall conform to IS : 8566-1977†.

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*Rules for rounding off numerical values (*revised*).

†Specification for reed wire.

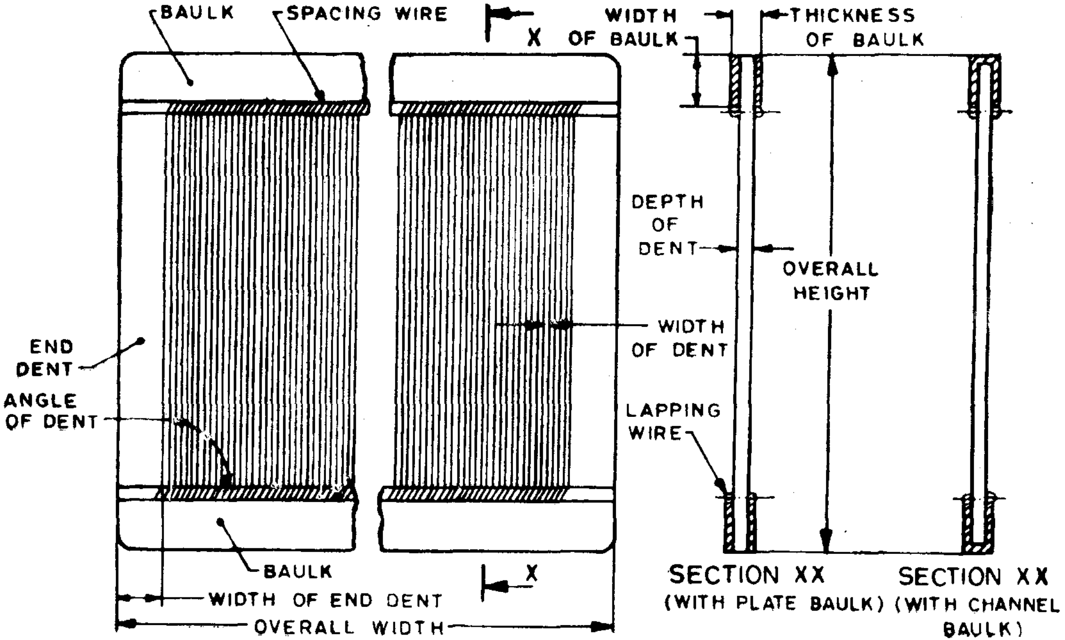

FIG. 1 A TYPICAL METAL REED

3.2 Baulks — Colled-rolled mild steel strips/channels or aluminium channels shall be used for making baulks.

3.3 Spacing/Baulking Wire — The spacing wire used should be soft and ductile enabling it to remain in form in which it is bound to avoid loosening of the dents. Nylon/cotton thread is used as spacer in case of synthetic bound reeds.

4. WORKMANSHIP

4.1 Strips or channels used for baulks shall be soldered or resin-bonded securely. The ends of the baulks shall be properly welded or riveted and the rivets shall not protrude on the surface of baulks.

4.2 The reed shall be free from rust and shall be straight and uniform throughout its length. However, warping if any shall not exceed 1 mm per metre reed width. The dents shall be well polished and their edges rounded and finished smooth. The solder or resin should not have trickled down between the dents.

4.3 Spacing of Dents — All the dents in the reed shall be equally spaced.

4.3.1 Conformity of a reed to the requirements of **4.3** shall be judged by means of reed gratings.

NOTE — Shirley Institute grating glass may be used for the purpose or any other suitable method may be followed.

5. DIMENSIONS

5.1 The dimensions of metal reeds shall meet the following requirements:

Count (*see* Note 1)	As marked
Overall width, mm	As marked ± 2 mm
Overall height, mm	90, 95, 100, 105, 110, 115, 120, 130, 140, 150 or 160 ± 1 mm
Working height, mm	As declared ± 2 mm
Depth of dent, mm	2·5, 3·0 or 4·0 ± 0·02 mm within reed and ± 0·04 mm between reeds
Width of dent, mm (*see* Note 2)	As marked ± 0·01 mm
Plate baulk height, mm	8·0, 10·0, 12·0, 18·0 or 22·0 ± 0·5 mm

Plate baulk thickness, mm	4·5, 5·0, 5·5, 6·0, 6·5 or 8·0 ± 0·2 mm
Angle of dent	90° ± 1°

NOTE 1 — Count of reed is the number of units, each consisting of one dent and one space per 50·8 mm width of reed. The usual counts are:

32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84,
88, 92, 96, 100, 104, 108, 112, 120, 124 and 128

NOTE 2 — The width of dents shall be in relation to the count of reed so as to give 50 percent or desired air space.

6. MARKING AND PACKING

6.1 Each reed shall be marked with the following on the end dents:

a) Manufacturer's name, initials or trade-mark, if any; and
b) Count, overall width in mm and air space in percentage.

6.1.1 Each reed may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors may be obtained from the Indian Standards Institution.

6.2 Packing — Each reed shall be given a coating of rust preventive agent and packed in waxed paper or polyethelene/polypropylene bag. The reeds shall be securely boxed to withstand transit hazards.

6.3 Each package shall bear the following information:

a) Name of the manufacturer/trade-mark;

b) Name of material, count, overall width and air space in percentage.

7. SAMPLING AND INSPECTION

7.1 Unless otherwise agreed to between the buyer and the seller, to ascertain the conformity of metal reeds to the requirements of this specification, single sampling plan with Inspection Level I and Acceptable Quality Level (AQL) of 2·5 percent given in Tables 1 and 2 of IS : 2500 (Part I)-1973* shall be followed.

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*Sampling inspection tables: Part I Inspection by attributes and by count of defects (*first revision*).

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemen	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

INDIAN STANDARDS INSTITUTION

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 26 60 21, 27 01 31 **Telegrams : Manaksanstha**

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